

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



549548

(43) International Publication Date  
30 September 2004 (30.09.2004)

PCT

(10) International Publication Number  
WO 2004/083453 A1

(51) International Patent Classification<sup>7</sup>: C12Q 1/48

(21) International Application Number:  
PCT/AU2004/000336

(22) International Filing Date: 18 March 2004 (18.03.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
2003901270 18 March 2003 (18.03.2003) AU

(71) Applicant (for all designated States except US): MED-  
VET SCIENCE PTY. LTD. [AU/AU]; 20 Dalglish  
Street, Thebarton, South Australia 5031 (AU).

(72) Inventors; and

(75) Inventors/Applicants (for US only): PITSON, Stuart, M.  
[AU/AU]; 1B Threfall Avenue, Norwood, South Australia  
5067 (AU). BOLZ, Steffen-Sebastian [DE/DE]; Institut  
der Ludwig Maximilians, Universitaet, Schillerstrasse 44,  
80336 Munich (DE).

(74) Agents: OBRANOVICH, Tanla, D et al.; DAVIES COL-  
LISON CAVE, 1 Nicholson Street, Melbourne, Victoria  
3000 (AU).

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),  
Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), Euro-  
pean (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR,  
GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK,  
TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,  
ML, MR, NE, SN, TD, TG).

**Published:**

— with international search report

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: A METHOD OF MODULATING SMOOTH MUSCLE CELL FUNCTIONING BY MODULATING SPHINGOSINE  
KINASE MEDIATED SIGNALLING

(57) Abstract: The present invention relates generally to a method of modulating smooth muscle cell functioning and agents useful  
for same. More particularly, the present invention relates to a method of modulating smooth muscle tone by modulating intracellular  
sphingosine kinase mediated signalling. The method of the present invention is useful, *inter alia*, in the treatment and/or prophylaxis  
of conditions characterised by aberrant, unwanted or otherwise inappropriate smooth muscle tone, in particular aberrant, unwanted  
or otherwise inappropriate vascular, bronchial or intestinal smooth muscle tone.

WO 2004/083453 A1